F. P. Keen
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Monthly Report for September, 1935

R. T. Webber
Sept. 30, 1935

Satin Moth Investigations in the Northwest - U. S.

Sept. 1 - 30, - In most part devoted to the collection and dissection of hibernating S. salicis for the purpose of ascertaining the dispersion and effectiveness of the introduced parasites. Also devoted to the compilation of late larval, pupal and egg collections which are submitted herewith.

Summary of late larval collections. *1

*1 - Although these collections are made at random they are however composed principally of last instar larvae, in most part collected at the commencement of pupation.

Parasites obtained

Location of infestation	Number of larvae collected	Apanteles No.	%	Meteorus No.	%	Compsilura No.	%	Tachinomyia No.	%	E. mella No.	%	Tachinid sp. No.	%	Hymenoptera sp. No.	%
Hoquiam.....	298	-	-	-	-	-	-	3	1.0	-	-	-	-	1	.3
Elma	144	-	-	-	-	-	-	2	1.4	1	0.7	-	-	-	-
Longview	306	5	1.2	-	-	-	-	21	5.4	-	-	-	-	-	-
Maripcorner .	45	-	-	-	-	-	-	1	2.2	-	-	-	-	-	-
Mossyrock ...	9	-	-	-	-	-	-	1	11.1	1	11.1	-	-	-	-
Chehalis	78	4	5.1	-	-	-	-	3	3.8	2	2.5	-	-	-	-
Centralia ...	294	2	0.7	-	-	-	-	29	10.2	2	0.7	-	-	-	-
Bush	112	-	-	-	-	-	-	3	2.6	-	-	-	-	-	-
Olympia	152	-	-	-	-	2	1.5	4	3.7	1	7.5	-	-	-	-
Yelm	112	2	1.7	-	-	-	-	11	9.8	-	-	-	-	-	-
Greendale ..	344	2	0.5	7	2.0	-	-	5	1.4	-	-	-	-	-	-
E. Greendale.	94	1	1.0	3	3.1	1	1.0	1	1.0	-	-	-	-	-	-
Lakeview	186	3	1.6	-	-	1	0.5	3	1.6	-	-	-	-	-	-
Eatonville ..	27	3	11.1	-	-	-	-	5	18.5	-	-	-	-	-	-
Graham	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tacoma	648	8	1.2	-	-	225	34.7	63	9.7	3	0.4	-	-	-	-
No. Tacoma ..	374	-	-	-	-	164	43.8	23	6.1	5	1.3	-	-	-	-
Puyallup	314	2	0.6	7	2.2	9	2.0	-	-	1	0.3	-	-	-	-
Sumner	1141	-	-	198	17.3	6	0.5	12	1.0	1	0.08	1	0.08	*2-	-
Kent	10	-	-	5	50.0	-	-	-	-	-	-	-	-	-	-
Enumclaw	42	2	4.7	-	-	3	7.1	3	7.1	-	-	-	-	-	-
Renton	175	-	-	1	0.5	1	0.5	1	0.5	-	-	-	-	-	-
Medina	89	1	1.1	1	1.1	1	1.1	27	30.3	-	-	-	-	-	-
Kirkland.....	98	4	4.0	1	1.0	6	6.1	1	1.0	-	-	-	-	-	-
Houghton	17	-	-	-	-	1	5.8	7	41.1	-	-	-	-	-	-
No. Bend	18	3	16.6	-	-	1	5.5	-	-	-	-	-	-	-	-
Redmond	303	-	-	-	-	1	0.3	4	1.3	-	-	-	-	-	-
Monroe	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Everett	236	24	10.1	1	0.4	-	-	8	3.3	-	-	-	-	-	-
Marysville ..	153	6	3.9	-	-	-	-	8	5.2	-	-	-	-	-	-
Silvana	371	5	1.1	-	-	-	-	-	-	-	-	-	-	-	-
Stanwood	435	2	0.4	-	-	-	-	-	-	-	-	14	3.4	-	-
Mt. Vernon ..	80	7	8.7	-	-	-	-	10	12.5	-	-	-	-	-	-
Burlington ..	66	5	7.5	-	-	1	1.5	-	-	-	-	-	-	-	-
Allen	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Whitney	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anacortes ...	98	4	4.0	-	-	-	-	12	12.2	-	-	-	-	-	-
Bellingham ..	48	2	4.7	-	-	-	-	2	4.7	-	-	-	-	-	-
	7004	95		234		423		273		17		14		1	

*2 - Not included since the species recovered is merely an accidental parasite of S. salicis.

Condensed summary of late larval collections.

Collections of 7094 larvae made in 38 localities in the state of Washington gave the following results:

Apanteles solitarius Ratz. - 95 individuals were recovered or an average of 1.3% parasitism for the entire area. In the region of its recovery (22 localities) the parasitism ranged from0.4% to 16.6% with an average of 2.2%.

Meteorus sp. - 224 individuals were recovered or an average of 3.1% parasitism for the entire area. In the region of its recovery (9 localities) the parasitism ranged from 0.4% to 50% with an average of 8.9%

Compsilura concinnata Meig. - 423 individuals were recovered or an average of 5.9% parasitism for the entire area. In the region of its recovery (15 localities) the parasitism ranged from 0.3% to 43.8% with an average of 11.4%.

Exorista mella Walk. - 17 individuals were recovered or an average of 0.2% parasitism for the entire area. In the region of its recovery (9 localities) the parasitism ranged from .08% to 11% with an average of 0.5%.

Tachinomyia sp. - 273 individuals were recovered or an average of 3.8% for the entire area. In the region of its recovery (28 localities) the parasitism ranged from 0.5% to 41.1% with an average of 4.7%.

Tachinid sp. - 14 individuals were recovered or an average of 0.1% for the entire area. In the region of its recovery (1 locality) the parasitism was 3.2%.

Hymenopterous sp. - 1 individual was recovered or an average of .01% for the entire area. In the region of its recovery (1 locality) the parasitism was .3%.

The parasitism by all species for the entire area was 14.7%, the introduced species being responsible for 10.4% of this total.

Summary of pupal collections.

Location of Infestation	Number of larvae collected	Parasites obtained: Compsilura		E. mella		Tachinomyia		Tachinid sp.		Hymenopterous sp.	
		No.	%	No.	%	No.	%	No.	%	No.	%
Hoquiam ...	103	-	-	-	-	-	-	-	-	-	-
Elma	82	-	-	-	-	-	-	-	-	-	-
Longview ..	100	-	-	-	-	4	4.0	-	-	-	-
Centralia .	107	-	-	-	-	5	4.6	-	-	-	-
Olympia ...	33	-	-	-	-	1	3.0	-	-	-	-
Lakeview ..	44	-	-	-	-	2	4.5	-	-	-	-
Greendale .	137	-	-	-	-	2	1.4	-	-	-	-
E. Greendale	39	-	-	-	-	-	-	-	-	-	-
Tacoma	51	4	7.8	-	-	1	1.9	-	-	-	-
... Puyallup	105	5	4.7	-	-	5	4.7	-	-	-	-
Sumner	100	-	-	1	1.0	3	3.0	-	-	-	-
Renton	100	-	-	-	-	-	-	-	-	-	-
Redmond ...	100	-	-	-	-	4	4.0	-	-	-	-
Stanwood ..	114	-	-	-	-	-	-	6	5.2	1	0.09
Burlington	28	-	-	-	-	2	7.1	-	-	-	-
Allen	50	-	-	-	-	-	-	-	-	-	-
	1293	9		1		29		6		1	

Condensed summary of the pupal collections.

Collections of 1293 pupae made in 16 localities in the state of Washington gave the following results:

Compsilura concinnata Meig. - 9 individuals were recovered or an average of 0.7% parasitism for the entire area. In the region of its recovery (2 localities) the parasitism averaged 5.1%.

Exorista mella Walk. - 1 individual was recovered or an average of 0.7% parasitism for the entire area. In the region of its recovery (1 location) the parasitism averaged 1.0%.

Tachinomyia sp. - 20 individuals were recovered or an average of 2.2% parasitism for the entire area. In the region of its recovery (10 localities) the parasitism averaged 3.0%.

Tachinid sp. - 6 individuals were recovered or an average of 0.4% parasitism for the entire area. In the region of its recovery (1 location) the parasitism averaged 5.2%.

Hymenopterous sp. - 1 individual was recovered or an average of 0.07% parasitism for the entire area. In the region of its recovery (1 locality) the parasitism averaged 0.8%.

The parasitism by all species for the entire area was 3.6%, the introduced species (Compsilura) being responsible for 0.7% of this total.

Summary of egg collections.

Locality of Infestation	Numbers of egg masses collected	Results of Hatching: 90% complete number	partial number	non-hatch number	Parasitized egg masses number
Sumner	25	22	3	0	0
Longview ..	30	26	4	0	0
Redmond ...	32	24	8	0	8
Stanwood ..	52	50	2	0	0
Greendale .	25	23	1	1	0
Centralia .	62	46	12	4	0
Puyallup ..	25	22	3	0	0
Tacoma	25	22	3	0	0
Elma	25	19	4	2	0
Hoquiam ...	15	15	0	0	0
	316	269 or 85.12%	40 or 12.65%	7 or 2.2%	8 or 2.53%

A total of 316 egg masses were collected from 10 localities and over 85% of them proved to be 90% or more fertile. Less than 3% of the egg masses proved infertile.

Egg parasites, probably Telenomus sp. were obtained from one locality. At Redmond, 8 of the 32 egg masses collected produced this species of parasite. Since the parasitism was confined to a very few eggs of each cluster, the effectiveness of the species, for the present year at least, is negligible.